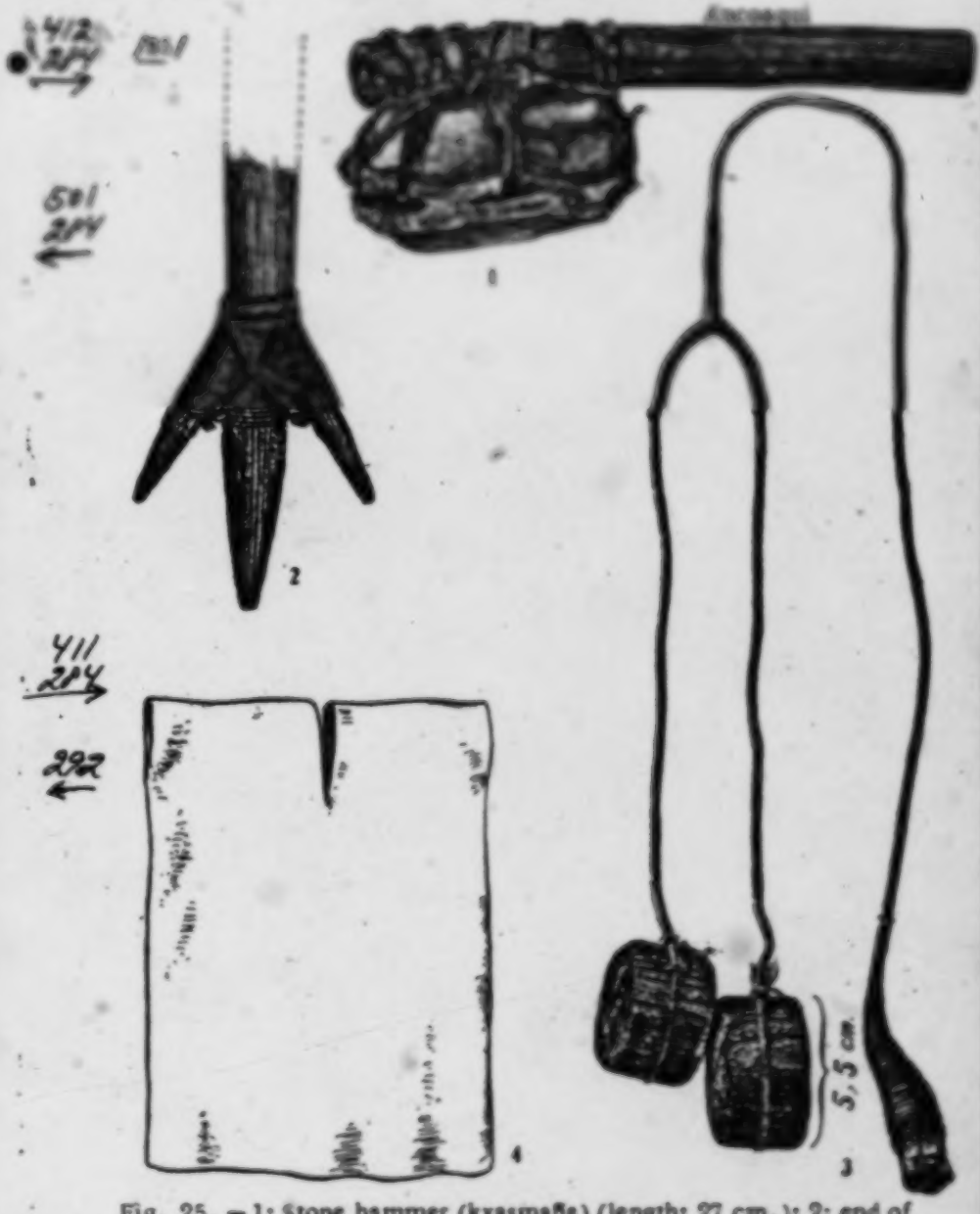


Fig. 25. — 1: Stone hammer (kxasmaña) (length: 27 cm.); 2: end of the boathook which the Uru use to propel their cane rafts (l'okena); 3: bolas (skuni); 4: tunic of white wool which the Uro wear over their modern clothes for certain occasions (ira) (length: 1.05 m. width: 0.62 m

2 Mexico--141 E-5 (1930-1931) 1935, 1936 SF24 Uru SF24
Caranga--
Chipaya

/156 cont./ The framework of the latter is entirely formed by faggots
of wila (Lepia, Tessa) solidly bound into cylinders with straw ropes
(waru) (Pl. VI, B /see p. 215/). They are thrust in the holes of
which we have just spoken and then tied together (Fig. 1, H /see
p. 142/). The number of arches which make up the skeleton of the
roof is eight and they are arranged in two groups of four which are
superimposed and are fastened at the intersections by solid ligatures.
Up to the last moment the framework is held up by props of Cereus
wood /147/. /Figure 1 appears here/ /158/ in order to allow the
roofers to walk on the arches without making them fall in.

On this frame is spread a sort of linoleum (pirina) made of straw (p'it) stuck together with mud, the whole forming flexible plates which take the form of the frame. On top of this thin covering, the function of which is to make the roof impermeable, the straw is laid. The roofers receive large bunches of it which are hoisted up with rope. They spread it on the edge of the roof, where they trample it down by foot. These sheaves are then sewn on the faggots by means of a long wooden needle (tapa) threaded with straw cord (Fig. 1, A) and wielded by two workers, one inside the hut and the other outside. The needle, after having passed through the linoleum, goes around each of the faggots in turn and returns to encompass a new sheaf of straw. The remaining straw is arranged in successive layers, imbricated up to the summit. The adherence of this thatch to the roof and its resistance to the terrific gusts of wind on the altiplano is assured by means of a straw net which is made on the roof itself. The quadrangular or triangular mesh of this net are not exactly knotted but simply made by the intercrossing of a long straw cord which is tightened by traction carried out from below to above in pace with the formation of the net.

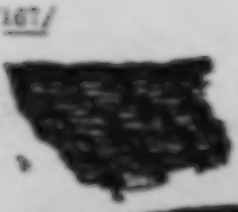
The roof is not considered finished until a straw cross surmounts it, which, according to native belief, protects the house from the effects of lightening.

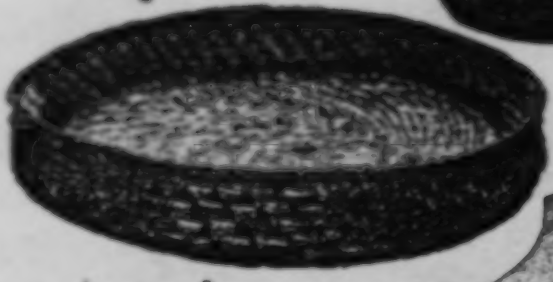
Furnishings. The interior disposition of Čipaya huts is most summary. The only furniture of any importance is the earthen stove

[Text Continues on p. 143]

/167/

385
[315]





415
[201]

[384]

/See captions on next page./

/176 cont./

415 Besides these vessels of archaic form which have not been
199 shaped with the help of a potter's wheel, the Čipaya use locally
439 produced receptacles, the technique of which is more advanced and influenced by European civilization. These vessels are produced in quantity in various regions of the altiplano and bear trademarks.

The Čipaya take good care of their ceramics, each piece of which represents a pecuniary sacrifice for them; hence many pots for daily use are wrapped in a protective sheath of undressed leather (Fig. 6, C /see p. 165/).

[192] The names (maska, luš, čua yuru, oč, yakina) that the
[194] Čipaya give the different pieces of pottery they use are always Aymara. One can deduce from this that the Uro did not know this industry or that they have been dependent on the Aymara for a long time in this respect.

283 Spinning. The raw sheep's wool (uš-čuma) or llama wool (xwal-čuma) is rolled around the left arm and spun by means of a spindle (t'eri) (Fig. 4, H /see p. 157/). The spindle stick is not surmounted by any enlargement. The weight /whorl/ (waiñu) is now of turned wood, but I was still able to obtain two specimen crudely carved with a knife.

[284] To spin, a bit of wool is pulled out and attached to the spindle by a /177/ slipknot. The movement communicated to the spindle is made by holding the thumb against the index and middle finger of the left hand, from right to left. When the spindle has begun to turn, the male or female spinner rapidly brings the right hand toward the left, following the thread (kauni) being formed. This movement is to even the thread. Once the hands are together, he draws out the wool and repeats the twisting movement. The spindle is suspended at the end of the thread, or, when the spinner is seated, it turns in a bowl (Pl. V, B /see p. 214/). When a certain length of thread has been obtained it is unrolled from the top part of the spindle and rolled on below. A new loop is made and the spindle is placed in action again in the way indicated. The threads obtained by this method are generally very thin. For weaving

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Chipaya

/183 cont./

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[284]

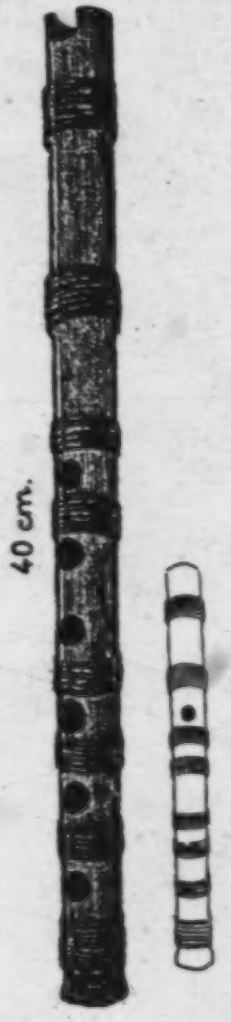

Fig. 9. — Quena.

Fig. 10. — a: Cross section of a flute with mouthpiece;
b: Cross section of a quena.

/184 cont./

534

I	II	III	IV	V	VI	Thumb
19.8	22.6	25.7	28.9	31.8	35.0	1.65

The total length of the flute is 39.8 cm.

[177] We do not find the same disposition of the holes on pre-Spanish quena; according to all probability European influence has played a part here.

Flutes with mouthpieces. When the quena is played the current of air is shaped and directed with the lips and must be conducted against the beveled edge of the mouth to break up there and set the column of air in the pipe vibrating. For flutes with mouthpieces (Fig. 11) the formation of the current of air and the direction given to it are produced automatically; it is sufficient to blow and to control the strength of the air current. The air is led through a "vent" (see Figure 10, a /see p. 175/, which shows us a flute with mouthpiece in section) composed of the space between the walls of the pipe and a block of some material inserted in the opening of the flute. The air passes through this channel and strikes against the lower brim (lip).

[824] Čipaya flutes with mouthpieces are made of tola (Baccharis tola). These Indians /185/ make them themselves, taking an old one as a model to give them the distance between the holes. These flutes are made of a branch which is split along its entire length. The two halves are hollowed out and then joined again in such a way that the air cannot escape. Where a perfect joint could not be made, the chinks have been sealed with resin. Since it is difficult with the bushes at the disposal of the Čipaya to come across straight branches, most of the flutes are not straight. Some even have the shape of a segment of a circle, a form which is perhaps intentional (Fig. 8, H /see p. 173/).

Fig. 11. Flute with mouthpiece.

/173 cont./

*539 [396] 14. We are going to place a rim of totoras. 15. He attaches the rim of the balsa. 16. He tightens the rim of the balsa. 17. We are going to finish. 18. (The totora) is still a bit loose; we are going to tighten it a bit more. 19. All is finished. 20. Now the balsa is ready. 21. Let us go fishing [501] with the new balsa. 22. We are not going to hoist a sail? 23. We are not accustomed to use a sail; there is too little water. 24. We always use a boat hook manipulated by hand. [226] 25. Here is the stone which is attached to the large net so that the fish can enter. 26. The fish is going to enter (the net); now we are going to lift (the net) up and put it in the balsa.

Remarks

This text is divided into two parts. The first, 1 to 20, describes the making of balsas from totoras. The second is a succinct description of fishing with a net in the swamps of the Desaguadero.

*539 396 [824] To build their balsas the Uru use the Scirpus totora, which used to grow in abundance in the swamps of the Desaguadero and at numerous points on the shores of Lake Titicaca. Two Indians work at the same time on the con- [114] struction of a balsa. First they lay out the bunches of totoras on the ground, from which they make three spindles the length of the balsa, two large side ones and a middle one which is shorter and thinner; this middle cylinder, the "heart of the balsa," used to stabilize the craft, has passed unnoticed by practically all the authors who have concerned themselves [171] with the Uru. Only the fishers on the lagoon of Arapa, to the north of Lake Titicaca, who speak Keŝwa, build balsas, small and rather narrow, formed with two cylinders.

● [284] The totora of three cylinders is held in place with the aid of thin straw plaits (2-4), which hold the cylinders evenly between them. These straw ropes are tightened in a progressive and methodical fashion by two /174/ men, working alternately

5:La Barre E-5 (1937-1938) 1946
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224 They do little hunting of land animals, but they may lasso the head male of a herd of vicuña which has been driven from the heights by the cold of winter, then club the remainder of the herd.

233 **Herding.**—The *Uru* have a few livestock—sheep, cows, and occasional llamas—but these are restricted in number by the scant pasture on the mainland. The cattle are usually half-wild and forage in the
231 swamps, eating the succulent reed stalks and roots. The *Uru* have dogs, guinea pigs, chickens, and pigs; the last are kept in mud sties or allowed to wander through the village.

241 **Farming.**—Maize will not grow in this infertile and cold region, which is more than 12,000 feet (3,600 m.) above sea level; but a few bitter potatoes and some quinoa are cultivated.

252 **Food preparation.**—The few potatoes cultivated are frozen and dried to make chuñu. Women grind quinoa with a long, flat, stone muller on a stone metate which slants outward from their laps, then toast it to make a nourishing powder (pitu). The succulent white
[262] root of the totora reed is eaten raw. Shrimplike crustaceans from the river are toasted.

273 Beer is made of quinoa and, when they can get it, of maize, which they chew into chicha.

276 Like all the altiplano peoples, the *Uru* chew coca.
171

HOUSES

342 Most *Uru* houses have an oval ground plan, but some are rectangular. The walls are built of rectangular turf blocks laid in horizontal courses, much as the ancient chullpas, or grave-houses, the outer wall often plastered with adobe. The entrance always faces east and is closed at night by a thick door made of bunches of totora reeds placed
[284] vertically and joined together at intervals by double horizontal cords in twined technique. The roof framework is of sticks or of reed bundles; the main ridge of the roof arches east and west, with stick or reed-bundle purlins resting on this ridge and the side walls. This framework is covered with reed mats (pl. 113, *top, left*)—single totora stalks twined at intervals with grass cord. Grass ropes are laid over
[354] the mats and tied to pegs in the outside wall. The fire in the mud stove to the right inside the door speedily coats the roof with soot and
[392] makes it waterproof. Greasebrush (tola), chunks of a woody semi-subterranean plant (yareta), and llama dung—in the absence of wood in this treeless region—serve as fuel. Some smaller *Uru* shelters have a corbeled turf dome instead of a frame with mat thatching. The
[184] Sojopaca *Uru* build temporary shelters of mud, "like beavers," similar to the domed houses of the islet of Simillaque. On the Isla of Panza there are round, stone-roofed houses.

5:La Barre E-5 (1937-1938) 1946
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edge of the pontoons. The whole makes a sea-sled type of hull, which will not easily overturn even in the fierce storms of Lake Titicaca.

The balsa is poled along with a stubby trident, the wood for which comes from the yungas east of the Cordillera Real. In the open lake, a trapezoidal reed sail is rigged on two poles stuck deeply into the pontoons and forming an inverted V. The balsa is unable to tack in the wind, however, for it lacks a centerboard. Balsas are dragged onto the land from time to time lest they become waterlogged and rot. Though they may be bought for 10 to 16 Bolivian dollars (bolivianos), they represent much labor.

MANUFACTURES

Uru material culture is simple. Owing to the lack of trees, the giant totora reed (*Scirpus tatora*) is of extraordinary importance, providing material for fishweirs, roof mats (pl. 117, *top, left*), floor and sitting mats, rafters, doors, balsas, sails, and even food for animals and people. Metallurgy is unknown. Pottery making has been abandoned in recent times.

Basketry.—Crudely coiled baskets and twined tortora reed baskets are made.

Textiles.—The *Uru* make twine bird nets, mats of various types, sails, grass rope, and simple baskets (both coiled and twined). Women spin llama wool as incessantly as the men make grass rope, using a wooden spindle. They weave the yarn into cloth on a simple bar loom staked taut on the ground (pl. 116, *top*), rolling up the finished cloth on the end bar. When the end of the warp is approached, they weave from the other end, and finally fill in the last intermediate strip with a needle. Knitting is not pre-Columbian here, but *Uru* women are very skillful in knitting *Aymara*-type caps (gorros), often with amazingly intricate animal figures and other designs. Men's slingshots are very beautifully braided of wool with varicolored diamond designs like the markings on snakes. The *Uru* also make thongs of twisted rawhide still retaining the fur, and heavy braided woolen ropes for lashing loads on burden animals.

An extremely interesting textile, apparently unique to the region southeast of Lake Titicaca, is a kind of feather cloth described by David Forbes (1870). The down of lake birds was spun into thread, and then knit into caps and children's socks and gloves. Only a few specimens of these exist in museums.

Weapons.—To make bolas, the *Uru* buy cotton thread from traders and wind this tightly around a cord Y to make a durable bird-hunting weapon. A straw-cord bola perdida, similar to that of Patagonia, is also used.

Metals.—The *Uru* know no metallurgy, although the *Aymara* of Jesús de Machaca, scarcely a day's journey away, are famous for their